



**BOEING REALTY CORPORATION  
FORMER C-6 FACILITY  
LOS ANGELES, CALIFORNIA**

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**REQUEST FOR WELL CLOSURE**

**GROUNDWATER MONITORING WELLS TMW-3, TMW-5, TMW-12,  
TMW-13, AND WCC-11S**

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**To:** Mr. Brian Mossman  
Boeing Realty Corporation  
3855 Lakewood Blvd.  
Building 1A MC D001-0097  
Long Beach, CA 90846

**From:** Haley & Aldrich, Inc.

**Date:** October 11, 2002

**Re:** Request for Closure, Groundwater Monitoring Wells TMW-3, TMW-5, TMW-12, TMW-13,  
and WCC-11S, Boeing Realty Corporation, Former C-6 Facility, Los Angeles, California

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**Introduction**

Haley & Aldrich, Inc. (Haley & Aldrich) is herein providing this request to close groundwater monitoring wells TMW-3, TMW-5, TMW-12, TMW-13, and WCC-11S at the Boeing Realty Corporation's (BRC's) Former C-6 Facility in Los Angeles, California (Site). The Site location is shown on Figure 1 and groundwater monitoring well locations are shown on Figure 2. Groundwater monitoring wells TMW-3, TMW-5, TMW-12, and TMW-13 are located in Parcel C and well WCC-11S is located along the northern boundary of Parcel A. The wells need to be closed due to conflicts with new building construction.

**Background**

Groundwater monitoring wells TMW-3, TMW-5, TMW-12, and TMW-13 are located in the central and southern portion of Parcel C and are within the planned footprints of two buildings to be constructed (Figure 2). Groundwater monitoring well WCC-11S is located on Parcel A at 19160 Harbortgate Way and is also within the planned footprint of a building to be constructed.

The five groundwater monitoring wells to be closed were installed from 1990 through 1999 and extend to depths ranging from 85 to 91 feet below ground surface (bgs). The well construction details for each well are provided on Table 1 (attached). Since installation, groundwater monitoring well WCC-11S has been sampled up to 34 times and the other wells have been sampled up to 11 times including the annual sampling event in March 2002. The following table summarizes the trichloroethene (TCE) concentrations in micrograms per liter ( $\mu\text{g/l}$ ) for each well from the March 2002 annual sampling event.

<b>Groundwater Monitoring Well</b>	<b>TCE (µg/l) March 2002</b>
WCC-11S	72
TMW-3	4,000
TMW-5	3,900
TMW-12	150
TMW-13	74

The five groundwater monitoring wells provide upgradient, downgradient, and/or crossgradient groundwater quality data for the Building 1/36 area and Building 2 area chemical plumes located on-site. Once the new building redevelopment plans are finalized, BRC will evaluate the installation of replacement groundwater monitoring wells, anticipated in early 2003.

#### **PROPOSED WELL CLOSURE PROCEDURE**

The closure of the five groundwater monitoring wells will proceed as follows:

- 1.) **Permit** - Prior to drilling activities, a permit will be obtained from the Los Angeles County Department of Health Services for each groundwater monitoring well closure.
- 2.) **Groundwater Level Measurement** - Measure the depth to groundwater in each well from the top of casing to the nearest 0.01-foot using an electronic water level indicator. The measurement will be recorded in the field log.
- 3.) **Groundwater Sampling** - The groundwater monitoring wells were recently sampled in March 2002 as part of the Site-wide Annual groundwater monitoring event. Sampling was performed in accordance with the Regional Water Quality Control Board-Los Angeles Region (LARWQCB)-approved Groundwater Monitoring Workplan-2002, Boeing Realty Corporation, Former C-6 Facility dated December 20, 2002. Based on this recent sampling, it is proposed that no additional groundwater sampling be performed as part of the well closure effort. The laboratory analytical results of the previous sampling event will be included in the well closure report.
- 4.) **Well Closure** - The groundwater monitoring wells will be closed by pulling the PVC casing and screen from each hole with a drill rig. Once the casing and screen have been pulled, the well seal and sand pack will be over-drilled using a hollow-stem auger to the total depth of each well as listed on Table 1.

The borings will then be backfilled with a neat cement grout via tremie pipe. Grouting will be completed from the bottom of each borehole to within 10 feet of ground surface as the augers are retracted. The grout will be allowed to cure overnight and the top 10 feet of each borehole will be completed the second day with concrete to the ground surface. Volumes of grout used to backfill the boreholes will be recorded in the field log. Well closure work will be performed by a California-licensed well contractor.

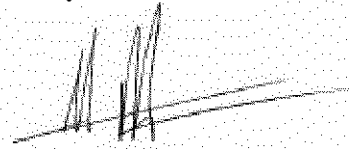
Following well closure, a letter report will be submitted to the LARWQCB by January 30, 2003 documenting the well closure activities.

Wastes generated by the well closure process will be containerized and sampled for disposal characterization/profiling. Once waste characterization data has been received, BRC will select the appropriate waste disposal facility. Documentation of waste disposal will be included in the closure report.

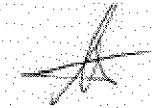
The Site-Specific Health & Safety Plan (HSP) dated June 8, 2001 will be used for on-site personnel performing the well closure activities. This HSP has been previously submitted to the LARWQCB.

Should you have any questions concerning the contents of this memorandum or require additional information, please contact either of the undersigned.

Sincerely yours,  
Haley & Aldrich, Inc.



Richard M. Farson, PE  
Project Engineer



Scott P. Zachary  
Project Manager

Attachments:

Table 1 – Well Construction Details of Wells to be Closed

Figure 1 - Site Location Map

Figure 2 – Site Plan Showing Groundwater Monitoring Wells and Groundwater Monitoring Wells To Be Closed

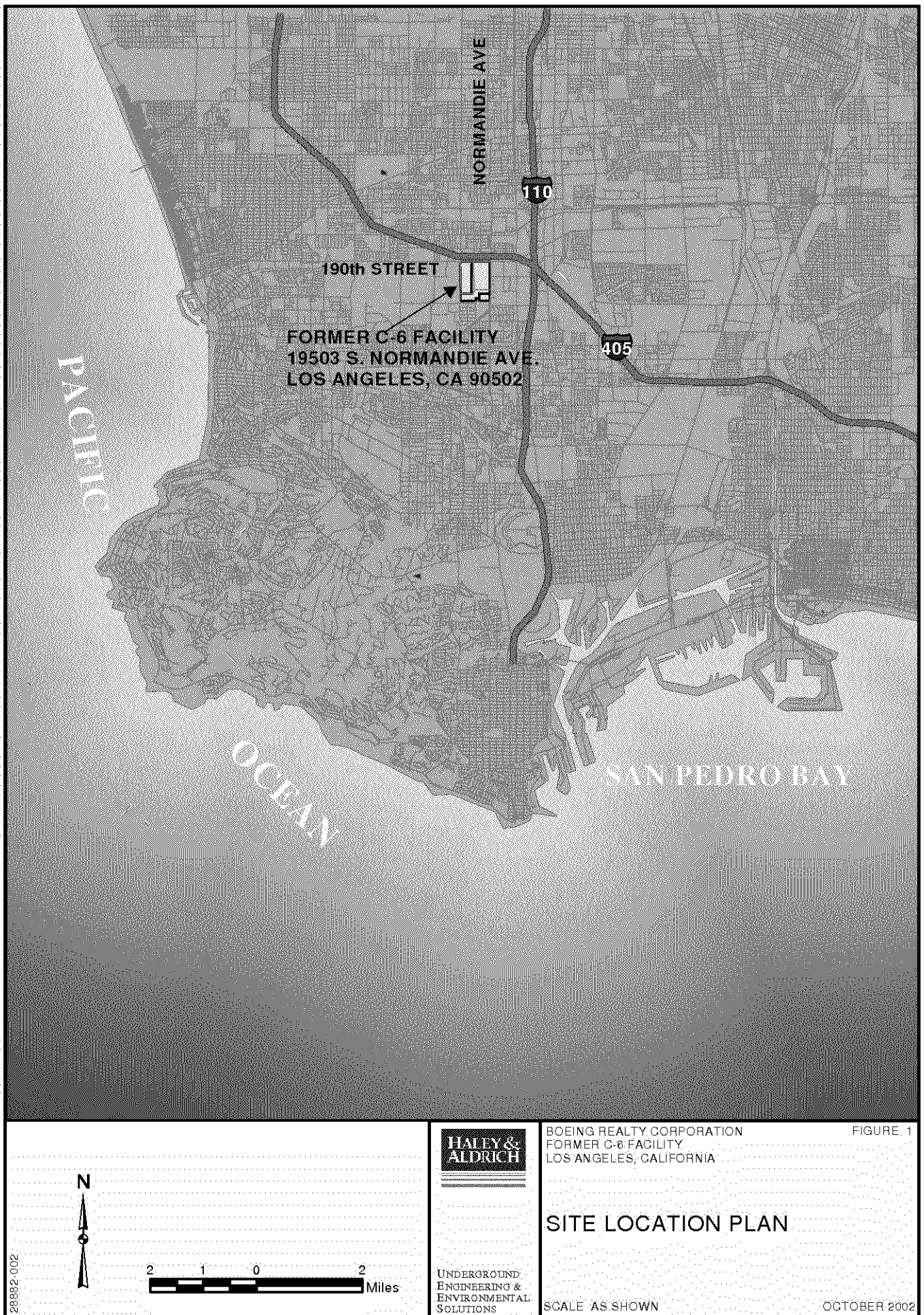
**Table 1**  
**Well Construction Details of Wells to be Closed**  
Boeing Realty Corporation Former C-6 Facility  
Los Angeles, California

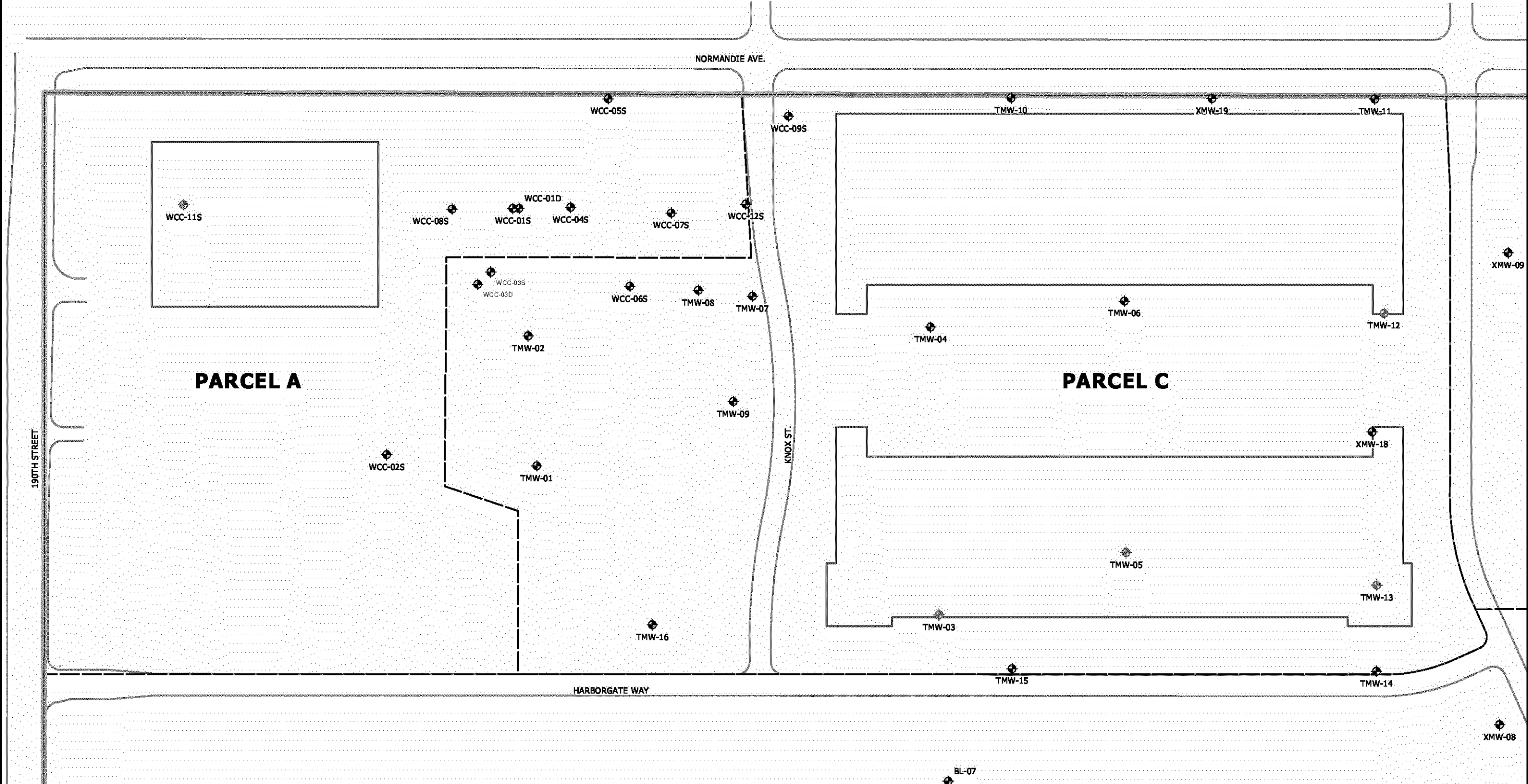
Name	Easting <sup>1</sup>	Northing <sup>1</sup>	Top of Casing Elevation (AMSL) <sup>2</sup>	Boring Total Depth (feet)	Screen Depth Interval (feet)	Depth to Top of Filter Pack (feet)	Casing Diameter (in)	Casing Type	Slot Size	Drilled Date	No. Times Sampled
WCC-11S	12744.01	13870.68	51.34	91	60-90	56	4	Sched 40 PVC	0.010-Inch	9/13/1990	34
TMW-3	11909.54	12315.47	51.36	87	62.5-82.5	60	2	Sched 40 PVC	0.010-Inch	7/21/1998	10
TMW-5	12038.44	11931.45	53.32	89	64-84	63	2	Sched 40 PVC	0.010-Inch	7/2/1998	11
TMW-12	12529.43	11402.90	51.67	89	63-83	60	2	Sched 40 PVC	0.010-Inch	1/27/1999	6
TMW-13	11973.10	11416.11	50.89	85	60-80	58	2	Sched 40 PVC	0.010-Inch	2/2/1999	6

1 Local coordinate system (feet)


2 AMSL = Above Mean Sea Level - Wells were surveyed March 19, 2002 & September 13, 2002 by Tait & Associates.


BRC = Boeing Realty Corporation







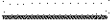
**Legend**

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TMW-01

Groundwater Monitoring Location
-   
TMW-12

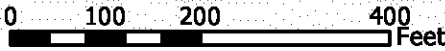
Groundwater Monitoring Well  
to be Closed
- 

Property Boundary
- 

Parcel Boundary
- 

Proposed New Building Footprint

All Locations and Dimensions are Approximate



BOEING REALTY CORPORATION  
FORMER C-6 FACILITY  
LOS ANGELES, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER  
MONITORING WELLS AND GROUNDWATER  
MONITORING WELLS TO BE CLOSED

SCALE AS SHOWN

FIGURE 02

OCTOBER 2002

28882-002